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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,086	05/02/2001	Akinori Nishizawa	81800.0156	7098

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EXAMINER	
LAM, ANDREW H	
ART UNIT	**PAPER NUMBER**
2625	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/848,086	NISHIZAWA, AKINORI	
	Examiner	Art Unit	
	Andrew H. Lam	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-9 and 11-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-9 and 11-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- This action is responsive to the following communication: an Amendment filed on 01/03/06.
- Claims 1, 2, 4-9 and 11-14 are pending in the present application. Claims 1 and 8 are amended. Claims 3 and 10 are canceled.

Specification

The disclosure is objected to because of the following informalities: on page 3 of the specification lines 3 and 5 the "second block" should be "first block" based on preceding description of the first and second block on page 2 of the specification.

Appropriate correction is required.

Claim Objections

Claim 1 is objected to because of the following informalities: on page 3 of the amendments to the claims the last line in claim 1 the "second block" should be "first block" since it should correspond to the "first power supply unit" based on the disclosure in the specification. Appropriate correction is required.

Claims 4-7, 11 and 12 objected to because of the following informalities: in claims 4-7, 11 and 12, the claims recite dependence on canceled claims 3 and 10, respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,2 4-9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki (U.S Patent No. 6,097,616) hereinafter Iwasaki in view of Takeda (U.S. Patent No. 5,760,494) hereinafter Takeda.

Regarding claim 1, Iwasaki discloses Regarding claim 1, Iwasaki discloses an image forming apparatus (fig. 4, printer/ copier) comprising: a plurality of processing circuits categorized into first (fig. 6, 4b and 4c are the first circuit block) and second (fig. 6, 4a is the second block circuit) blocks with respect to respective functions of the plurality of circuits; a power transformer (fig. 1, primary rectifying circuit, col. 1, lines 64-65, AC is rectified into DC, it is well known in the art that in order to convert AC to DC you have to use a power transformer to step down the voltage) having a plurality of secondary winding; a first power supply unit for always feeding DC current to the first block of processing circuits from at least one of the plurality of secondary windings (col. 5, lines 29-30, the 5 VE is continuously provided from the power supply unit); a second power supply unit for feeding DC current to the second block of processing circuits from the plurality of seconding windings other than the at least one of the plurality of secondary windings (fig. 6, 4b and 4c, 12V and 24V); at least one switch located between the plurality of secondary windings and the second block of processing circuits for interruption of power supply to the second block of processing circuits (col. 5, lines 40-42, the switch 5 is used to interrupt the voltages of the copy machine) ; a control unit (fig. 5, main control circuit 16a) for controlling the respective switch such that the DC current from the secondary windings to the second block of processing circuits is

interrupted in a power save mode and the DC current is fed to the second block of processing circuits from the secondary windings in a normal mode (col. 5, lines 30-35, additionally, +5 VE is provided from the power supply unit 15 to the main control circuit 16a of the control board 16. The +5 VE is continuously provided from the power supply unit 15 to the main control circuit 16a even when the copy machine 10 is set in a power-saving mode and other voltages +5V, +-.12V and +24V are interrupted, so that the copy machine 10 can return to a regular operation mode when an instruction signal is provided from an external apparatus).

Iwasaki does not disclose expressly a voltage converting circuit for converting DC voltage of the first power supply unit to DC voltage of another level such that DC voltage of another level is fed to the first block of processing circuits in the power save mode.

Takeda discloses a voltage converting circuit for converting DC voltage (fig. 1, DC/DC converter 5) of the first power supply unit to DC voltage of another level such that DC voltage of another level (Iwasaki, col. 4, lines 58-67).

Iwasaki and Takeda are combinable because they are from a similar field of endeavor of controlling voltages to components in an image processing apparatus during power saving mode and normal mode. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of converting DC voltage to another level as taught by Takeda with the step of providing constant DC voltage to the processing circuits in power save mode. The motivation for

doing so would have been to get the desired output DC voltage from any input DC voltage, thereby allowing the processing circuits to operate (Takeda, col. 4, lines 64-67).

Regarding claim 2, the combination discloses the image forming apparatus according to claim 1, wherein the control unit is operated with the DC current from the first power supply (Iwasaki, fig. 5, main control circuit 16a, is feed with 5V DC).

Regarding claim 4, the combination discloses the image forming apparatus according to claim 1, wherein the second block of processing circuits includes an image processing circuit, a printing unit, an image scanning unit and a communication control unit, and the DC current is fed to the second block of processing circuits from the voltage converting circuit in the power save mode (Iwasaki, col. 5, lines 5-20).

Regarding claim 5, the combination discloses the image forming apparatus according to claim 1, wherein the voltage converting circuit is a DC to DC converter (Takeda, fig. 1, DC/DC converter).

Regarding claim 6, the combination discloses the image forming apparatus according to claim 1, wherein the voltage converting circuit is a three-terminal regulator (Takeda, fig. 1, regulator 15, col. 8, line 65).

Regarding claim 7, the combination discloses the image forming apparatus according to claim 1, wherein the second block of processing circuits includes an image processing circuit, a printing unit, an image scanning unit and a communication control unit, and the DC current is fed to the second block of processing circuits in the normal mode (Iwasaki, col. 5, lines 5-20).

Regarding claim 8, Iwasaki discloses an image forming apparatus (fig. 4, printer/copier) comprising: a plurality of processing means for performing a plurality of functions (fig. 5, control board contain a plurality of circuit to perform functions); a plurality of power supply means for feeding DC current (fig. 5, 4a, 4b, 4c, contains DC output voltages to be feed into control board 16) to the plurality of processing means based on AC current from a plurality of secondary windings of a power transformer (fig. 1, primary rectifying circuit, col. 1, lines 64-65, AC is rectified into DC, it is well known in the art that in order to convert AC to DC you have to use a power transformer to step down the voltage); switching means (fig. 6, switch 5) for interrupting AC current to be fed to the plurality of power supply means from the plurality of secondary windings in a power save mode except for at least one of the plurality of power supply means (col. 5, lines 30-35, additionally, +5 VE is provided from the power supply unit 15 to the main control circuit 16a of the control board 16. The +5 VE is continuously provided from the power supply unit 15 to the main control circuit 16a even when the copy machine 10 is set in a power-saving mode and other voltages +5V, +-.12V and +24V are interrupted, so that the copy machine 10 can return to a regular operation mode when an instruction signal is provided from an external apparatus).

Iwasaki does not disclose expressly a voltage converting means for converting DC voltage fed from the at least one of the plurality of power supply means to another level of voltage such that the another level of DC voltage is fed to the respective processing means from the voltage converting means in the power save mode.

Takeda discloses a voltage converting means for converting DC voltage (fig. 1, DC/DC converter 5) fed from power supply unit to DC voltage of another level such that DC voltage of another level (col. 4, lines 58-67) is fed to respective processing means.

Iwasaki and Takeda are combinable because they are from a similar field of endeavor of controlling voltages to components in an image processing apparatus during power saving mode and normal mode. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of converting DC voltage to another level as taught by Takeda with the step of providing constant DC voltage to the processing circuits in power save mode. The motivation for doing so would have been to get the desired output DC voltage from any input DC voltage, thereby allowing the processing circuits to operate (Takeda, col. 4, lines 64-67).

Regarding claim 9, the combination discloses the image forming apparatus according to claim 8 further including control means for controlling the switching means, and wherein the control means is operated with DC current fed from the at least one of the plurality of power supply means (Iwasaki, fig. 5, main control circuit 16a, is feed with 5V DC).

Regarding claim 11, the combination discloses the image forming apparatus according to claim 8, wherein the voltage converting means is a DC to DC converter (Takeda, fig. 1, DC/DC converter 5).

Regarding claim 12, the combination discloses the image forming apparatus according to claim 10, wherein the voltage converting means is a three-terminal regulator (Takeda, fig. 1, regulator 15, col. 8, line 65).

Regarding claim 13, the combination discloses the image forming apparatus according to claim 8, wherein the plurality of processing means includes image processing means, printing means, image scanning means and communication controlling means (Iwasaki, col. 5, lines 5-20).

Regarding claim 14, the combination discloses the image forming apparatus according to claim 8 further including means for determining whether an element of the image forming apparatus is moved, and for interrupting power supply to high voltage components among the plurality of processing means (it is well known in the art to use a safety switch to turn off power to a device when a cover is open for servicing).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew H. Lam whose telephone number is (571) 272-8569. The examiner can normally be reached on M-F (9:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KA Williams

KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER

Andrew Lee 3/20/06